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ABSTRACT

To inform decision-making regarding distance learning courses and options, two surveys were conducted in 1993. One, completed by 288 secondary and postsecondary institutions serving deaf learners, asked about interest in course offerings by the National Technical Institute for the Deaf and Rochester Institute of Technology (NTID/RIT). The other, completed by 74 NTID alumni (about 16% of those contacted), investigated their knowledge of technology and interest in NTID/RIT distance courses. Survey findings suggest that initial efforts at marketing courses should focus on postsecondary institutions, on graduates who have been out of school for more than 10 years, and who have not obtained a bachelor's degree. Establishment of a few demonstration sites is recommended to build interest, since overall survey response rates were low. Four appendixes include the survey questionnaires. Fourteen tables present survey findings. (Contains 12 references.) (SLD)

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ED 377 214

The Views of Adult Deaf Learners and Institutions Serving Deaf Learners Regarding Distance Learning Cooperative Arrangements with NTID/RIT: The Results of Two Surveys

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EXECUTIVE SUMMARY

Distance learning and telecommunications technologies offer considerable benefits to adult deaf learners who wish to participate in continuing education opportunities and who find actual class attendance problematic. NTID/RIT has experience in delivering distance instruction to deaf learners (i.e. The RIT/Gallaudet telecourses), but currently too little is known about both the specific benefits and pitfalls regarding distance learning options for this population. To better inform future decision making regarding the offering of distance learning courses and programs, two surveys were conducted in early 1993:

- Survey forms were mailed to 1200 secondary institutions and 406 postsecondary institutions serving deaf learners. Of the 1606 survey forms mailed, 288 were returned for a return rate of 17.9%.

- Four hundred fifty learner surveys were mailed to a random sample of 2700 NTID alumni. Seventy-four surveys were returned, for a response rate of 16.4%

The research questions and results are as follows:

Questions Regarding Institutions

1. Are administrators of secondary and postsecondary institutions who serve deaf learners interested in making NTID/RIT course offerings available to their students, faculty and staff?

   Yes, and they provided many suggestions for additional courses and programs.

2. If so, what telecommunications equipment do they have available and which have they used?

   They have available some of the basic technologies such as a VCR and TV decoders, but many would need equipment and assistance in feeling comfortable with such equipment before distance learning would be a viable option for them.

3. If interested in pursuing collaborative agreements with NTID/RIT, are they interested in the programs and courses currently available?

   Yes, and they listed additional possibilities. Many felt strongly that all offerings need to be captioned.

4. How do the institutions interested in pursuing collaborative agreements differ from those who do not want to pursue them?

   They differed in the money available to pursue an agreement, in the kinds of technologies available and in their knowledge of distance learning. Many of the uninterested institutions have a student body that is too young for NTID/RIT courses.

Questions Regarding Deaf Adult Learners

1. How knowledgeable and experienced are deaf NTID alumni with distance learning options and technologies?

   As NTID graduates, they are knowledgeable and comfortable with a variety of technologies. But, the caution needs to be made that they may not be typical of other deaf adult learners.

2. Do NTID alumni have an interest in pursuing NTID/RIT degree programs and courses through distance learning?

   Somewhat. They named many courses and programs they would like to see added.

3. If so, what is their access to and familiarity with the technologies most typically used?

   They are a reasonably sophisticated group regarding technologies.

4. How do alumni interested in pursuing NTID/RIT distance learning opportunities differ from those who are not interested in doing so?

   There are differences, but they are surprisingly similar.

Implications and Recommendations

1. NTID's Strategic Plan (1992) discussed the exploration of distance learning technologies as a means of instructional delivery to deaf learners. This report of two survey efforts represents a first step in addressing those recommendations in the Strategic Plan. A Core Team will need to be pulled together with designated leadership to continue explorations into this area.

2. Initial efforts at marketing distance learning courses and program should be aimed at post-secondary institutions (particularly two-year programs) as well as instructors at secondary schools. Initial marketing efforts with Alumni should focus on graduates who have been out of school for more than ten years and who have obtained a certificate, diploma or AAS degree but not a BA or MA.

3. While there are many adult deaf learners and institutions who wish to pursue distance learning opportunities with NTID/RIT, we do not know why the nonresponding institutions and alumni did not complete and return the survey forms. Since we have a list of respondent names and addresses (to send them further information on our distance learning offerings), perhaps it would be beneficial to conduct a telephone survey of a random sample of nonrespondents.

4. The authors recommend the establishment of a few initial demonstration sites with a very limited number of offerings in two basic areas: a) factual courses (math, science, etc.) and b) discussion-type courses. It may also be important to begin with the courses respondents indicated held the most interest for them: Deaf Culture, deaf education, etc. It will be very important to provide an orientation to distance learning (possibly instruction in the use of the technologies employed) and to derive a means of helping learners feel connected to one another.

5. The most reasonable places to begin are areas where distance learning holds the most advantages: delivering instruction to areas where the potential student population is large but dispersed and who have expressed unmet learning needs in the areas of our strength; areas where fiber optics is currently available; and sites who have experience with distance learning technologies. It is crucial to begin with sites who have expressed the strongest interest in collaborating with NTID/RIT.

6. Initial efforts should be research and demonstration ones. Since matters of funding distance learning offerings is of concern to many institutions, grant monies should be pursued to eliminate this concern and to enable an exploration of both the efficacy and efficiency of instructional delivery via distance learning technologies and to enable the captioning of all instructional offerings.

The Views of Adult Deaf Learners and Institutions Serving Deaf Learners Regarding Distance Learning Cooperative Arrangements with NTID/RIT: The Results of Two Surveys

The National Technical Institute for the Deaf (NTID), a college of Rochester Institute of Technology (RIT), is committed to assessing the applicability of a variety of educational technologies to facilitate the learning of deaf undergraduate students, alumni, and other deaf adults (Strategic Plan, 1992; National Priorities Pertaining to Educational Applications of Technology for Deaf Students, 1992).

There are many premises which have guided NTID in developing the recommendations found in the documents mentioned above:

- In today's global economy, learning and skill enhancement is a continuing, lifelong need.
- There needs to be more continuing education opportunities for deaf learners. While the American with Disabilities and Higher Education Acts promote accessible educational opportunities for individuals with all types of disabilities, the accommodations required to optimally serve deaf persons are costly. Thus, this population is all-too-often not actively recruited for continuing education courses and programs.
- Deaf learners are geographically dispersed and, as is true for learners in general, have diverse learning needs and preferences.
- Distance learning and other educational technologies offer considerable promise in enabling institutions to reach geographically dispersed deaf learners in a cost efficient manner.

Distance learning technologies enable an instructor in one location and students in others to communicate with one another through telecommunications. Interactivity may be accomplished through a common telephone link-up, through an Integrated Services Digital Network (ISDN), a network of computer networks (e.g. Bitnet and Internet), satellite, and broadcast technologies. The growing availability of fiber optic cables means there will soon be more cost-effective computerized communication. Fiber can transmit all signals (telephone calls, data transmission, fax, graphics, animation; compressed, full motion, and high definition television) and it has extraordinary bandwidth, which expands channel capacity. There is very little that occurs in a typical classroom that cannot be made accessible to the distant learner.

The Impetus for This Project

Two pilot telecourses were offered in the Fall semester of 1991 with students and faculty at Rochester Institute of Technology and Gallaudet University (see McKee and Scherer, 1992). The course, "Black Civil Rights in the Twentieth Century," was taught by a RIT history professor with a Gallaudet "resource person" or co-teacher. A professor at Gallaudet University taught "Mass Media and Deaf History" with a RIT faculty member as "resource teacher."

The individuals who formed a "working group" for an evaluation of the telecourses described above had continued to meet and discuss means of improving and making available a variety of distance learning courses to deaf learners. The group also functioned as an advisory committee for the project reported in this paper. The working group members from NTID represent the Departments of Educational Outreach, Educational Research and Development, General Education Division, Liberal Arts Support, and Instructional Design and Evaluation. RIT members represent the College of Liberal Arts and the Office of Distance Learning (see Appendix A for a complete list of the names and titles of working group members).

Working group members realize that available telecommunication technologies bring challenges as well as opportunities. While the benefits of distance learning instruction are many (e.g. Ohler, 1991) and several successful models exist, such as the Star Schools Program (e.g. Withrow, 1991 and Simonson, Sweeney, & Kemis, 1993), course expenses are often high (e.g. Barker & Burnett, 1991) and there is evidence that students do not benefit equally from computer-based instruction (e.g. Abouserie, Moss & Barasi, 1992; Kay, 1992; and Torkzadeh & Angulo, 1992). Additionally, as noted by Johnstone (1991), little is known about the success of distance learning instruction with persons who have special learning needs, although Gallaudet University's ENFI (Electronic Networks for Interaction) program has been effective in employing computerized interaction as a means of improving deaf students' written English (Peyton et al, 1993).

The NTID/RIT Distance Learning working group determined that too little is known about the learning styles and preferences of deaf persons regarding distance learning technologies to begin to make any programmatic recommendations. A better course of action, it was decided, would be to conduct a needs assessment of potential adult deaf learners and relevant collaborating institutions.

METHODS

The following questions guided the writing of two needs assessment forms, one for potential institutional collaborators (Appendix B) and one for deaf adult learners (Appendix C).

Questions Regarding Institutions

1. Are administrators of secondary and postsecondary institutions who serve deaf learners interested in making NTID/RIT course offerings available to their students and staff?

2. If so, what telecommunications equipment is available and which have they used?

3. If interested in pursuing collaborative agreements with NTID/RIT, are they interested in the programs and courses currently available?

4. How do the institutions interested in pursuing collaborative agreements differ from those who do not want to pursue them?

Questions Regarding Deaf Adult Learners

1. How knowledgeable and experienced are deaf NTID alumni with distance learning options?

2. Do NTID alumni have an interest in pursuing NTID/RIT degree programs and courses through distance learning?

3. If so, what is their access to and familiarity with the technologies most typically used?

4. How do alumni interested in pursuing NTID/RIT distance learning opportunities differ from those who are not interested in doing so?

The forms were designed to be complementary, and were divided into three broad categories: (1) Demographic information, (2) Access to and familiarity with telecommunications technologies, (3) Interest in pursuing NTID/RIT courses and programs of study. The survey for NTID alumni also had a section asking respondents to indicate their learning styles and preferences.

Results

The Institutional Survey

Survey forms were mailed to 1200 secondary institutions and 406 postsecondary institutions serving deaf learners. Of the 1606 survey forms mailed, 288 were returned for a return rate of 17.9%. A primary purpose of this study was to determine the characteristics of institutions and learners who might be interested in pursuing distance learning courses offered through NTID/RIT or, in the case of institutions, in cooperation with NTID/RIT. Therefore, the results of the survey have been reported for interested and not interested institutions separately. The responding institutions were separated into the two groups based on their response to the question: "Please send me the complete list of courses and programs [currently offered through the Office of Distance Learning at RIT]."

Demographic information about the responding institutions

Tables 1, 2 and 3 present background information on the responding institutions. As shown in Table 1, the majority of responding institutions, whether interested in distance learning courses or not, represent public, secondary, mainstream programs. However, over eighty percent of those two-year or four-year institutions that responded to the survey were interested in additional information about distance learning. **This is a noteworthy result and has been reported separately in Table 2.** Elementary schools were least like to desire additional information, secondary school respondents fell in the middle and respondents representing post-secondary institutions were by far the most likely to request such additional information.

The number of deaf students served by all responding institutions ranged from 0 to 99. Institutions interested in learning more about distance learning options tended to serve slightly more students.

There was little difference between the interested and uninterested groups in the number of faculty who work directly or indirectly with deaf students.

The respondents were asked for their perceptions of the features of distance learning courses and to rate their previous experience with such courses. That information is presented in Table 3 with additional comments provided by respondents listed in Appendix D. **Respondents who were interested in distance learning information were more likely to have taken or taught a distance learning course, were less like to say they had "no idea" what comprised the features of distance learning courses, and were slightly more likely to have a positive overall impression of distance learning.**

Respondents were also asked about their access to and familiarity with a variety of educational technologies frequently used in distance learning. Responses to those questions are summarized in Table 4. Interested institutions were more likely to have access to E-Mail, Cable TV and Satellite Communication than were their non-interested counterparts. There was no significant difference in the use of the various technologies between the two groups, with the exception of FAX machines.

In summary, interested institutions are more likely to be post-secondary institutions or public or private secondary mainstream programs, they serve more than 40 students and generally have more positive overall impressions of distance learning courses. They are more likely to have access to electronic mail.

Table 1
Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

DEMOGRAPHIC INFORMATION

Institutional Characteristics	% Interested Institutions	% Non-Interested Institutions
Type of Institution		
Mainstream program	55.1	50.0
Public school	69.1	68.5
School for the Deaf	11.2	10.2
Secondary school	69.1	79.6
2-year community college	18.5	7.4
4-year college	8.4	1.9
Private school	3.4	2.8
Elementary school	39.3	53.7
Average Number of Deaf Students Served	41.3	36.4
Average Number of Students who have Attended NTID	5.1	6.9
Average Number of Faculty/staff who work with deaf students		
Directly	18.3	17.5
Indirectly	18.5	19.0

Table 2
Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

TYPE OF INSTITUTION

Type of Institution	Percent of each "characteristic group"	
	Interested	Not Interested
Mainstream program	64.5	35.5
Public school	62.4	37.6
School for the Deaf	64.5	35.5
Secondary school	58.9	41.1
2-year community college	80.5	19.5
4-year college	88.2	11.8
Private school	66.7	33.3
Elementary school	54.7	45.3

TABLE 3
Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

PERCEIVED FEATURES OF DISTANCE LEARNING COURSES

	% Interested N=177	% Not Interested N=109	t *
Distance learning feature			
Off-campus course	22.7	17.4	-1.10
For students who are studying overseas	20.4	20.2	-0.06
Allows classes to be taken at home	57.6	51.3	-1.03
Involves class meetings at regional centers	63.8	48.6	-2.53**
Used in correspondence study	59.9	47.7	-2.01*
Students finish courses at their own pace	43.5	42.2	-.22
Easier than traditional courses	6.8	2.8	-1.63
Interaction among students	31.6	24.8	-1.26
Interactions between student and instructor	42.9	36.7	-1.05
Uses satellite TV	59.9	56.9	-.50
Uses cable TV	57.6	46.8	-1.78
Uses electronic mail	44.1	35.8	-1.40
Uses a variety of media	58.8	46.8	-1.97*
No idea, I never heard the term before	15.2	25.7	2.09*
Have taken/taught a distance learning course	Yes=34% No=63%	Yes=24% No=74%	
			Mean
		(5=Very Positive to 1=Negative)	
Overall impression	2.12	2.34	2.22*
Overall experience with distance learning	1.90	1.79	-.70

TABLE 4
Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

ACCESS TO AND FAMILIARITY WITH DISTANCE LEARNING TECHNOLOGIES

Technology	Percent Indicating Access to or Familiarity with Technology		
	Interested	Not Interested	t
Have Access to Technology			
Decoder	82.4	77.9	-.92
Bitnet	4.6	6.8	-.79
Captioned TV	29.3	20.1	-1.78
Internet	10.7	5.5	-1.63
VCR	92.7	88.1	-1.24
E-Mail	44.1	24.8	-3.45**
CD-Rom, Videodisc	32.2	22.0	-1.91
Deaftek	3.3	5.5	.82
Cable TV	69.4	56.9	-2.14*
Satellite	34.4	19.2	-2.91**
Fax	71.1	65.1	-1.06
Have Used Technology			
Decoder	61.6	57.8	-.63
Bitnet	3.4	1.8	-.83
Captioned TV	22.6	14.7	-1.71
Internet	4.5	3.7	-.36
VCR	66.7	64.2	-.42
E-Mail	32.8	24.8	-1.47
CD-Rom, Videodisc	22.0	14.7	-1.59
Deaftek	3.9	2.8	-.56
Cable TV	55.3	49.5	-.96
Satellite	23.7	15.6	-1.72
Fax	57.0	44.9	-2.00

* = $p \leq .05$ ** = $p \leq .01$

Interest in pursuing NTID/RIT courses and program of study.

A primary goal of this study was to determine which, currently offered, programs are of interest to the responding institutions and which programs and courses they would like to see added.

As might be expected, those institutions who want to receive additional information about distance learning courses were more likely to indicate higher levels of interest in almost all the currently offered programs and courses (Table 5). Table 6 presents the verbatim list of other courses or programs the two groups of institutions suggested. **It is important to note that many of the "additional course/program offerings" recommended by the interested institutions concerned courses for their staff rather than their students.**

The last portion of the survey asked institutions to indicate the type of cooperative agreements in which they would be most interested. Responses are reported in Tables 7, 8 and 9. Institutions were given six types of possible cooperative arrangements and asked to check those they would be interested in pursuing. Table 7 shows the percent of interested institutions who checked each option. Professional courses for faculty and staff at the various institutions was the most frequently preferred option. Courses related to Deafness and Deaf culture for staff was an option that over eighty percent of the interested institutions indicated was of interest to them. Courses offered to secondary school students was the second most frequently chosen type of cooperative agreement.

A higher proportion of post-secondary institutions, compared to K-12 institutions, indicated an interest in receiving additional information about distance learning, therefore we also looked at the type of preferred cooperative arrangement by type of institution and that information is presented in Table 8. In table 8, we see some real differences between the responding institutions. Although all institutions were most interested in courses related to Deafness and Deaf Culture, **over half of the two year colleges would like to see NTID courses added as an alternative for their students and graduate courses available to their staff.** Secondary schools were interested in college preparatory courses for their students.

Table 9 presents a complete list of other types of cooperative arrangements suggested by the respondents. As can be seen from table 9, articulation and transfer agreements of various types were suggested by several of the interested respondents.

In summary, current offerings would be of most interest to two-year colleges and some secondary schools. The development of new courses should focus on graduate courses related to Deafness and Deaf culture geared to the faculty and staff of interested institutions.

TABLE 5

Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

INTEREST IN SPECIFIC COURSES OR PROGRAMS

Current Distance Learning Offerings	Mean of Institutions Who Do Want List (n = 54)	Mean of Institutions Who Do Not Want List (n = 20)	t
PROGRAMS:			
M.S. in Telecommunications Software Technology	.22	.05	-2.34*
M.S. in Software Development and Management	1.00	.61	-3.65**
B.S. in Applied Arts and Science (customizable degree)	.37	.17	-2.09*
Certificate in Applied Computing and Communications	.76	.33	-3.24**
Certificate in Data Communications	.66	.33	-2.54**
Certificate in Voice Communications	.17	.05	-1.76
Certificate in Health Systems Admin.	.22	.14	-.98
Certificate in Emergency Management	.17	.03	-2.41*
COURSES			
Telecommunications	.71	.39	-2.40*
Information Technology	.88	.50	-2.60**
Electrical/Mechanical Technology	.08	.06	-.55
Business (Management, Marketing, TQM, Accounting)	1.72	1.00	-5.15**
Health Care Administration	1.35	.79	-4.51**
Solid Waste Management	1.05	.59	-4.39**
Emergency Management	1.18	.63	-4.78**
Humanities (Philosophy, Politics, Literature, History)	1.46	.92	-3.97**
Language Communications (Persuasion, Technical Writing, Humna Communication)	1.64	.97	-4.94**
Social Science (Psychology, Sociology, Economics)	1.61	.98	-4.61**
Mathematics (College Algebra, Trigonometry, Calculus, Statistics	1.75	1.00	-5.37**
Contemporary Science	.49	.28	-1.83

a. Mean calculated by: 3 = Definitely interested
2 = Possibly Interested
1 = Not at all interested

b. t = Students t statistics for differences between group means

*p ≤ .05 **p ≤ .01 Others = No significant difference

TABLE 6

Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

SUGGESTIONS FOR ADDITIONAL COURSES AND PROGRAMS

Verbatim Suggestions for Course/Program Offerings

Interested Institutions:

- interpreting courses (5)
- advanced coursework for area professionals (Minnesota)
- We have a summer (travel) program in oceanography open to ALL students
- This high school in trying to start an IB college prep program -- want to do the same with our deaf high school students
- interactive TV courses offered to secondary students
- Many of our teachers need additional coursework for certification and there is nothing locally -- any courses you could offer in deaf ed would be helpful (3)
- need for education about DeafTek, Bitnet, Internet, email, CD-ROM (3)
- Certificates in Applied Computers and in Data Communication
- Deaf Culture
- Foreign languages
- information systems, telecommunications, business courses
- math courses
- technology consortium for community colleges
- interactions between deaf students in AL and other states
- Our deaf students want to improve their English and math skills
- vocational training for students with reading and math skills, but not writing skills

Uninterested Institutions:

- Liberal Arts courses
- advanced placement courses
- study skills
- career assessment
- high school level (interest) English and reading for low functioning students
- an introductory video of NTID
- as a means to link deaf students throughout our state
- courses/programs for deaf students who won't be attending college (2)
- courses in Deaf Ed.
- courses for becoming a certified interpreter (3)
- sign language courses for interpreters in rural areas

TABLE 7
Cooperative Arrangements Interested Institutions Prefer

Arrangement	Rank	Percent of Respondents Choosing Arrangement
Professional offerings:		
Courses on deafness and Deaf culture	1	86
Graduate courses	2	60
Secondary student offerings:		
College prep for RIT direct entry	3	66
Advanced placement courses	4	49
Postsecondary options:		
NTID/RIT courses added as alternatives	5	36
Exchange of college offerings	6	18

TABLE 8
Cooperative Arrangements Preferred by Type Of Institution

Type of Institutions	Percent Preferring Cooperative Arrangement					
	NTID/RIT courses added as an alternatives	Exchange of college offerings	Graduate courses	College prep for RIT direct entry	Advanced Placement courses	Deafness and Deaf Culture Courses
Elementary School	20.3	5.5	68.8	71.1	47.7	82.0
Secondary School	22.0	7.7	63.2	74.2	53.1	81.8
Two Year College	53.7	43.9	53.7	31.7	19.5	73.2
4 year College	29.4	23.5	52.9	11.8	5.9	70.6
Public Institution	23.9	10.2	60.9	66.5	49.2	84.3
Private Institution	33.3	22.2	83.9	77.4	67.7	87.1
School for the Deaf	38.7	6.5	83.9	77.4	67.7	87.1
Mainstreamed Institution	21.1	9.2	55.9	73.0	48.7	82.2

TABLE 9

Other Ideas for Cooperating Offered by Institutions Who Do and Do Not Want To Receive a Complete List of NTID/RIT Distance Learning Courses and Programs

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Interested Institutions

- Articulation and transfer agreements (2)
- 2+2 agreements, program specific between WVDE Office of Spec. Ed., a local NTID/RIT
- Gallaudet has regional centers -- such an arrangement would benefit both of our institutions
- We currently offer an upgrading year (Academic Continuing Education and could use some resources and support from NTID/RIT
- A concrete transfer program of quarter system credits from NTID to here and vice versa been traditionally difficult (2)
- Budget pressures are very high -- we cannot afford much (3)
- I would like to see NTID/RIT enter into a cooperative arrangement with the Central administering agency for the Hawaii Dept of Ed called the Statewide Center for Students with Hearing and Visual Impairments (gave address and contact person)

Uninterested Institutions

- As an extension campus of NTID -- we have an excellent language development program for deaf
- Cluster sites for distance learning on weekends or evenings

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The Alumni Survey

Four hundred fifty learner surveys were mailed to a random sample of 2700 NTID alumni. To help encourage alumni to respond, they were informed of three prize drawings of $50, $25 and $25. All complete surveys received by 28 February 1993 were eligible for the drawing. Since the "ticket" for the drawing asked for the respondent's name and address, it was printed on a separate sheet of paper. Seventy-four surveys were returned, for a response rate of 16.4%

Demographic information about the respondents.

Table 10 summarizes the background information regarding those students who responded to our survey. As can be seen from Table 10, the majority of Alumni respondents held two or four year degrees, were employed full time and had been in their present position for less than five years. Current job titles volunteered by alumni are listed in Appendix D.

Alumni interested in receiving more information about distance learning options were less likely to have graduate degrees, more likely to indicate they were not sure about registering for college courses in the coming year, and more likely to have been working in their current position for more than 10 years.

Interested Alumni were also likely to say it was impossible for them to attend on-campus courses and that it was "very important" for them to be able to fit courses around work and other responsibilities. Interested Alumni were also less likely to indicate they would pay for distance learning courses themselves and they were more likely to indicate their goals for taking such courses were preparing for or completing a bachelor degree program. It is interesting to note that interested Alumni are less likely to say that would enroll in a distance learning course for job advancement.

Table 11 summarizes the Alumni respondents perceptions of the features of distance learning courses. As can be seen from Table 11, there was little difference in perceptions between those Alumni who were interested in learning more about Distance Learning and those who were not. All Alumni are relatively sophisticated concerning the variety of features that can be involved in different types of distance learning situations and those exposed to distance learning (approximately 10%) reported no negative experiences with it. Appendix D lists other features alumni associate with distance learning and additional exposures they volunteered.

As shown in Table 12, in spite of their knowledge of distance learning, less than half of the responding alumni have access to or have used the technologies associated with distance learning. Interested alumni report more access to VCRs, CD-Rom, videodisc players, and cable TV, but the uninterested alumni generally have more experience with various technologies.

In summary, Those alumni who are interested in learning more about NTID/RIT distance learning opportunities are likely to have been employed for ten or more years and **would like to complete a bachelor's degree or pursue graduate education.** Yet, these alumni find on-campus instruction problematic and distance learning instruction an attractive option. Distance learning courses also present challenges, however, as most of the interested alumni either do not have access to many of the technologies involved or are not aware of the technologies available for their use.

Table 10
Alumni Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

DEMOGRAPHIC INFORMATION

Alumni Characteristics	Percent of Respondents	
	Interested Alumni N=54	Non-Interested Alumni N=20
Educational Level		
Current High School Student	0	0
High School Graduate	0	0
Some College	1.9	0
Two year degree	46.2	35.0
Four year degree	38.5	35.0
Graduate degree	13.5	30.0
Register for college course next year?		
Yes	15.7	15.0
No	23.5	45.0
Not Sure	60.8	40.0
Employed		
Yes, full time	74.1	70.0
Yes, part time	13.0	15.0
No	13.0	15.0
How long in current position?		
0-2 years	39.1	47.1
3-6 years	26.1	23.5
6-10 years	19.6	23.5
more than 10 years	15.2	5.9
Currently a student?		
Yes, full time	5.7	10.0
Yes, part time	9.4	10.0
Yes, occasional course	5.7	0
No	79.2	80.0
How difficult is it for you to attend on-campus courses?		
Impossible	12.0	5.0
Difficult	30.0	25.0
Inconvenient	34.0	30.0
No Problem	24.0	40.0
How important to fit course around work/other responsibilities?		
Very important	58.5	42.1
important	39.6	57.9
Not important	1.9	0
If you were to register for DL course, who would pay?		
employer	45.1	42.1
Voc Rehab	15.7	15.8
Myself	31.4	42.1
If you participated in DL courses, what would your goal be?		
Prepare for evening BS degree	25.9	10.0
Complete AAS degree	11.1	5.0
Complete BS program	31.5	25.0
Complete MS program	24.1	15.0
Complete technical Certificate Program	5.6	15.0
Enrichment/self-improvement	35.2	30.0
Job advancement	42.6	50.0

TABLE 11
Alumni Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs:

PERCEIVED FEATURES OF DISTANCE LEARNING COURSES

	Percent choosing feature		
	Interested N=54	Not Interested N=20	t *
Distance learning feature			
Off-campus course	57.4	40.0	1.33
For students who are studying overseas	24.1	30.0	.49
Allows classes to be taken at home	70.4	45.0	-1.95
Involves class meetings at regional centers	18.5	25.0	.57
Used in correspondence study	48.1	45.0	-.24
Students finish courses at their own pace	59.3	50.0	-.70
Easier than traditional courses	18.5	5.0	-1.85
Interaction among students	13.0	5.0	-1.17
Interactions between student and instructor	25.9	35.0	.73
Uses satellite TV	24.1	15.0	-.90
Uses cable TV	22.2	30.0	.65
Uses electronic mail	46.3	30.0	-1.30
Uses a variety of media	31.5	20.0	-1.03
No idea, I never heard the term before	**13.0**	**15.0**	**.22**
Have taken a distance learning course	**Yes= % No= %**	**Yes= 10% No= 70%**	
			Mean
		(5=Very Positive to 1=Negative)	
Overall impression	4.22	3.89	
Overall experience with distance learning	4.09	4.0	

TABLE 12
Institutions Who Do or Do Not Want Information Concerning Distance Learning Courses/Programs

ACCESS AND FAMILIARITY WITH DISTANCE LEARNING TECHNOLOGIES

Technology	Percent Indicating Access or Familiarity with Technology		
	Interested	Not Interested	t
Have Access to Technology			
Decoder	46.3	40.0	-.48
Bitnet	5.6	15.0	1.08
Captioned TV	18.5	10.0	-.98
Internet	7.4	10.0	.33
VCR	57.4	30.0	-2.19*
E-Mail	25.9	25.0	-.08
CD-Rom, Videodisc	7.4	0	-2.06*
Deaftek	5.6	5.0	-.09
Cable TV	46.3	15.0	-2.93**
Satellite	3.7	0	-1.43
Fax	37.0	25.0	-1.01
Have Used Technology			
Decoder	33.3	55.0	1.65
Bitnet	9.3	15.0	.63
Captioned TV	18.5	25.0	.57
Internet	5.6	10.0	.59
VCR	40.7	50.0	.70
E-Mail	25.9	35.0	.73
CD-Rom, Videodisc	9.3	5.0	-.67
Deaftek	3.7	0	-1.43
Cable TV	33.3	30.0	-.27
Satellite	3.7	5.0	.23
Fax	18.5	25.0	.57

* = $p \leq .05$ ** = $p \leq .01$

Interest in pursuing NTID/RIT courses and programs of study.

As with the surveyed institutions, we were particularly interested in finding out which of the courses already developed and being offered in a distance learning format, NTID alumni would be most interested in, assuming the courses were offered in an accessible format. Tables 13 and 14 present that information.

Alumni were presented with a list of the current RIT courses or programs of study and asked to indicate their degree of interest in those courses. With a few exceptions (see table 12), there were no significant differences in the expressed interest level of Alumni who did or did not request the additional information. However, when asked to suggest courses or programs they would be interested in pursuing, interested alumni suggested a great many more specific courses, for the most part those suggestions were technical courses or programs.

Alumni were also asked to complete a learning styles inventory and the responses to that inventory were broken down by interested and non-interested students. That information is reported in Appendix D. Interested and uninterested alumni do not significantly differ on their learning styles and characteristics with the sole exception of uninterested alumni reporting more flexibility. There was also a slight but not significant tendency for interested alumni to self report more curiosity and excitement about new things, enjoyment in reading, and interest in registering for more courses.

In summary, the NTID alumni are quite sophisticated in their knowledge of distance learning options and technologies, which is not surprising given their exposures during their time on campus here and the technical careers they have tended to pursue. Yet, they perceive that they have limited access to the technologies used in distance education. Alumni interested in obtaining further information about distance learning options tend not to differ significantly in most learning characteristics from their non-interested peers. It is likely that another group of deaf adults would respond somewhat differently.

In spite of the respondents technical sophistication, they do not express strong preferences for currently offered programs and courses and provided many suggestions for alternatives. Current courses that should receive priority for captioning and other modifications need for accessibility for deaf alumni should include: Information Technology, languages courses and mathematics courses. Any marketing materials sent to the alumni should also include provisions for career counseling since students would probably be registering for such courses in order to complete a bachelor or masters degree.

TABLE 13

Mean Interest Level of Alumni Who Do and Do Not Want To Receive a Complete List of NTID/RIT Distance Learning Courses and Programs

Current Distance Learning Offerings	Mean of Alumni Who Do Want List (n=54)	Mean of Alumni Who Do Not Want List (n=20)	t
PROGRAMS:			
M.S. in Telecommunications Software Technology	.38	.30	-.36
M.S. in Software Development and Management	.56	.30	-.98
B.S. in Applied Arts and Science (customizable degree)	.94	.90	-.12
Certificate in Applied Computing and Communications	.89	.45	-1.42
Certificate in Data Communications	.39	.15	-1.17
Certificate in Voice Communications	.17	.00	-1.77
Certificate in Health Systems Administration	.39	.15	-1.17
Certificate in Emergency Management	.44	.00	-3.04
COURSES			
Telecommunications	.72	.75	.08
Information Technology	1.06	1.05	-.01
Electrical/Mechanical Technology	.72	.30	-1.56
Business (Management, Marketing, TQM, Accounting)	.61	.75	.41
Health Care Administration	.61	.45	-.54
Solid Waste Management	.22	.15	-.39
Emergency Management	.50	.45	-.17
Humanities (Philosophy, Politics, Literature, History)	.22	.45	.85
Language Communications (Persuasion, Technical	.72	.60	-.37
Social Science (Psychology, Sociology, Economics)	.50	.30	-.78
Mathematics (College Algebra, Trigonometry, Calculus,	.94	.90	-.12
Contemporary Science	.11	.30	.86

a. Mean calculated by: 3 = Definitely interested 2 = Possibly Interested 3 = Not at all interested
b. t = Students t statistics for differences between group means
* = $p \leq .05$ ** = $p \leq .01$

TABLE 14

Other Ideas for Courses/Programs Offered by Alumni Who Do and Do Not Want To Receive a Complete List of NTID/RIT Distance Learning Courses and Programs

---

Suggestions for Course/Program Offerings

Interested Alumni

- Database Management (M.S.)
- M.S. in telecommunications software technologies or software development and management.
- anything related to computer technology/software/electronics
- Entrepreneurism
- computer imaging/graphics (2)
- updated and applied computer skills (2)
- photographic and electronic imaging lab
- human services administration
- career development
- developmental disabilities
- B.S. in Applied Health
- business English
- writing improvement
- continuing ed for JESP graduates
- plastics and polymer processing
- industrial engineering continuing ed
- MFA/MST courses

Uninterested Alumni

- advanced physics courses
- computer courses (2)
- electronic photography
- graduate social science courses
- real estate

Note: Number in parenthesis following comment, indicates the number of Alumni who suggested the same course or program

Summary

Survey forms were mailed to 1200 secondary institutions and 406 postsecondary institutions serving deaf learners and to 450 NTID Alumni (a random sample of every sixth name in a data base of 2700 alumni) with the primary goal of determining the characteristics of institutions and learners who might be interested in pursuing distance learning courses offered through NTID/RIT or, in the case of institutions, in cooperation with NTID/RIT.

Secondary and postsecondary institutions responding to the expressed a considerable amount of interest in pursuing cooperative arrangements with NTID/RIT. There is an interest on the part of such institutions in making distance learning opportunities available to their faculty/staff and students and respondents indicated many programs and courses to consider adding to the existing list. NTID alumni, while in favor of the concept of distance learning, indicated no strong preferences for the courses and programs currently offered and also provided suggestions for new courses and programs.

As expected, those institutions and individuals with more telecommunications technologies available to them expressed more interest in pursuing distance learning arrangements. This may be due to a level of comfort with the technologies and the fact that few funds need to be expended on their procurement.

Implications and Recommendations

1. NTID's Strategic Plan (1992) discussed the exploration of distance learning technologies as a means of instructional delivery to deaf learners. This report of two survey efforts represents a first step in addressing those recommendations in the Strategic Plan. A Core Team will need to be pulled together with designated leadership to continue explorations into this area.

2. Initial efforts at marketing distance learning courses and program should be aimed at post-secondary institutions (particularly two-year programs) as well as instructors at secondary schools. Initial marketing efforts with Alumni should focus on graduates who have been out of school for more than ten years and who have obtained a certificate, diploma or AAS degree but not a BA or MA.

3. While there are many adult deaf learners and institutions who wish to pursue distance learning opportunities with NTID/RIT, we do not know why the nonresponding institutions and alumni did not complete and return the survey forms. Since we have a list of respondent names and addresses (to send them further information on our distance learning offerings), perhaps it would be beneficial to conduct a telephone survey of a random sample of nonrespondents.

4. The authors recommend the establishment of a few initial demonstration sites with a very limited number of offerings in two basic areas: a) factual courses (math, science, etc.) and b) discussion-type courses. It may also be important to begin with the courses respondents indicated held the most interest for them: Deaf Culture, deaf education, etc. It will be very important to provide an orientation to distance learning (possibly instruction in the use of the technologies employed) and to derive a means of helping learners feel connected to one another.

5. The most reasonable places to begin are areas where distance learning holds the most advantages: delivering instruction to areas where the potential student population is large but dispersed and who have expressed unmet learning needs in the areas of our strength; areas where fiber optics is currently available; and sites who have experience with distance learning technologies. It is crucial to begin with sites who have expressed the strongest interest in collaborating with NTID/RIT.

6. Initial efforts should be research and demonstration ones. Since matters of funding distance learning offerings is of concern to many institutions, grant monies should be pursued to eliminate this concern and to enable an exploration of both the efficacy and efficiency of instructional delivery via distance learning technologies and to enable the captioning of all instructional offerings.

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Appendix A

Members of the NTID/RIT Distance Learning Working Group

Dr. Laurie Brewer, Director
NTID Center for Arts and Sciences

Dr. Gerard Buckley, Director
NTID Center for Outreach

Dr. Norman Coombs, Professor
RIT College of Liberal Arts

Ms. Christine Geith
RIT Office of Distance Learning

Ms. Karen Kimmel, Visiting Assistant Professor
NTID Department of Liberal Arts Support

Dr. Barbara McKee, Chair
NTID Department of Educational Research and Development

Dr. Jeff Porter, Associate Professor
NTID Department of Liberal Arts Support

Dr. Marcia Scherer, Evaluation Specialist
Department of Instructional Design and Evaluation

Appendix B

Survey Sent to Institutions

NTID/RIT DISTANCE LEARNING QUESTIONNAIRE

Technology is rapidly expanding in all fields and education is no exception. One of the changes that technology has brought to the field of education is increasing the ease by which people can communicate even though they may be far apart. The use of computers, telecommunications technology, and videotapes has made it possible for students to participate in courses and workshops even thought they may be in a different town, state or even country from the teacher and other students in the course. NTID has a long established reputation in offering quality education for deaf students and the Rochester Institute of Technology is a leader in distance learning. We want to know if your institution feels the students you serve could benefit from what we have to offer.

To better meet the educational needs of persons beyond the NTID/RIT campus, we would appreciate you taking a few minutes to complete this questionnaire. ***We assure you that all information you provide will be kept confidential. Only summary data will be reported and no institution will be identified by name.***

Please return your completed questionnaire in the accompanying stamped self-addressed envelope. THANK YOU very much for your help! We would appreciate your response by: February 28, 1993.

IMPORTANT

Please give the name and title of the person completing this questionnaire.

_____

_____

_____

FIRST SOME QUESTIONS ABOUT YOUR INSTITUTION AND STUDENTS...

1. Type of Educational Institution? (Check all that apply).

___ Elementary ___ Secondary ___ 2-year community college ___ 4-year college

___ Public ___ Private ___ School for the Deaf ___ Mainstream program

2. Number of deaf students served at your institution: _____

3. Have any of your students attended from NTID/RIT?

___ yes ___ no If yes, about how many? _____

4. How many of your faculty/staff work with deaf students?

_____ directly with deaf students _____ indirectly with or for deaf students

5. Please check all of the following that you believe are features of a **distance learning course**.

___ only for students who can't attend on campus
___ used with students who are studying overseas
___ allows classes to be taken at home
___ involves class meetings at extension sites
___ used in correspondence study
___ students finish courses at their own pace
___ easier than traditional courses
___ interaction among students
___ interactions between student and instructor
___ uses satellite TV
___ uses cable TV
___ uses electronic mail
___ uses multi-media
___ other: _____

___ **no idea, I never heard the term before**

6. Based on what you checked in #5 above, is your **impression** of distance learning courses

___ very positive ___ somewhat positive ___ neutral ___ somewhat negative ___ negative

7. Have you ever been involved with instruction via distance learning (either as a student, administrator or teacher)?

___ yes ___ no ___ not sure

8. If yes, what type of distance learning instruction?_____

9. If so, what was your experience with it?

___ very positive ___ somewhat positive ___ neutral ___ somewhat negative ___ negative___

10. Do you have convenient access to, or have you used any of the following?

	Convenient Access to	Have Used
TV Decoder	_____	_____
Bitnet	_____	_____
Captioned T.V. Courses	_____	_____
Internet	_____	_____
VCR	_____	_____
Electronic mail	_____	_____
CD-ROM and/or videodisc	_____	_____
DeafTek	_____	_____
Cable T.V.	_____	_____
Satellite	_____	_____
Fax Machine	_____	_____

COURSES CURRENTLY OFFERED BY RIT THROUGH DISTANCE LEARNING

Below is the list of courses and programs currently offered by the Distance Learning Office at RIT. Please check each as follows:

+ Our students would definitely be interested
? Our students would possibly be interested
o Our students would not be interested

Program Offerings:

_____ M.S. in Software Development and Management

_____ M.S. in Telecommunications Software Technology

_____ B.S. in Applied Arts and Science (customizable degree)

_____ Certificate in Applied Computing and Communications

_____ Certificate in Data Communications

_____ Certificate in Voice Communications

_____ Certificate in Health Systems Administration

_____ Certificate in Emergency Management

Particular undergraduate courses:

_____ Telecommunications

_____ Information Technology

Electrical/Mechanical Technology

_____ Contemporary Science

_____ Solid Waste Management

_____ Health Care Administration

_____ Emergency Management

_____ Humanities (Philosophy, Politics, Literature, History)

_____ Business (Management, Marketing, TQM, Accounting)

_____ Language Communications (Persuasion, Technical Writing, Human Communication)

_____ Social Science (Psychology, Sociology, Economics)

_____ Mathematics (College Algebra and Trigonometry, Calculus, Statistics)

We are considering captioning many of the courses listed on the top of this page. What courses/programs/workshops would you recommend that NTID/RIT offer via distance learning in a captioned format? Circle those you think the students you serve would seriously considering taking. If you want to receive the complete list of courses and programs currently offered by NTID/RIT please check the box below.

_____

_____

_____

☐ Yes, please send me the complete list of courses and programs.

WHAT KINDS OF COOPERATIVE ARRANGEMENTS WOULD YOU BE INTERESTED IN?

_____ I would like to see NTID/RIT courses added to our current offerings as collaborative alternatives for our students.

_____ I would like to see cooperative agreements between my institution and RIT, where our students could take some RIT courses and NTID/RIT students could register for some of our courses.

_____ I would like to see our professionals (deaf and hearing) have the opportunity to register for some of the graduate courses and programs offered by RIT.

_____ I would like our secondary school students to have the opportunity to take college preparatory courses in math, science and writing which will qualify them for direct entry to RIT freshman courses.

_____ I would like the opportunity for our secondary school students to take advanced placement and other college level courses through NTID/RIT.

_____ I believe our professionals (deaf and hearing) could benefit from courses related to deafness and deaf culture offered by NTID/RIT.

Please list other cooperative arrangements that you believe would be of benefit to your institution or the students you serve.

_____

_____

_____

Are you interested in establishing contact with someone at RIT about cooperative distance learning arrangements between your institution and RIT? If yes, check the line below.

_____ **Yes, please contact me.**

_____ **Yes, but I would prefer printed material only.**

_____ **No, not interested at the present time**

Appendix C

Survey Sent to NTID Alumni

NTID/RIT DISTANCE LEARNING QUESTIONNAIRE

Technology is rapidly expanding in all fields and education is no exception. One of the changes that technology has brought to the field of education is an increase in the ease by which people can communicate even though they may be far apart. The use of computers, telecommunications technology, and videotapes has made it possible for students to participate in courses and workshops even though they may be in a different town, state or even country from the teacher and other students in the course. NTID and RIT are interested in offering courses to students throughout the country. We want to know if you have had any experience with distance learning and if you would be interested in this kind of educational format.

Would you please take a few minutes and answer this questionnaire.

IMPORTANT

ALL THE INFORMATION YOU PROVIDE US WILL BE KEPT CONFIDENTIAL.

PLEASE RETURN COMPLETED FORM IN THE ENVLOPE PROVIDED PRIOR TO:

FEBRUARY 28, 1993

FIRST SOME QUESTIONS ABOUT YOU...

1. What is your educational level?

___ Current High School Student
___ High School graduate
___ Some College
___ Two year degree
___ Four year degree
___ Graduate degree

2. Are you an NTID/RIT graduate?
___ yes ___ no

3. Will you register for a college course next year?
___ yes ___ no ___ not sure

4. Are you employed?
___ yes, full-time ___ yes, part-time ___ no

4a. If yes, job title: _____

4b. How long have you worked in this position?
_____

5. Are you currently a student?

___ yes, full-time ___ yes, part-time
___ yes, an occasional course ___ no

6. Please check all of the following that you believe is a feature of **distance learning**.

___ off-campus course
___ for students who are studying overseas
___ allows classes to be taken at home
___ involves class meetings at regional centers
___ used in correspondence study
___ students finish courses at their own pace
___ easier than traditional courses
___ interaction among students
___ interactions between student and instructor
___ uses satellite TV
___ uses cable TV
___ uses electronic mail
___ uses a variety of media
___ other: _____

___ **no idea, I never heard the term before**

7. Overall, is your **impression** of distance learning courses:

___ very positive ___ somewhat positive
___ neutral ___ somewhat negative ___ negative

8. Have you ever taken a course via distance learning?

___ yes ___ no ___ not sure

8a. If yes, what type of distance learning course?

_____

8b. If so, what was your experience with it?

___ very positive ___ somewhat positive
___ neutral ___ somewhat negative ___ negative

9. Do you have convenient access to, or have you used any of the following?

	Convenient access to	Have used
TV DeCoder	_____	_____
Bitnet	_____	_____
Captioned TV courses	_____	_____
Internet	_____	_____
VCR	_____	_____
Electronic Mail	_____	_____
CD-ROM, videodisc or other multi-media	_____	_____
DeafTek	_____	_____
Cable TV	_____	_____
Satellite dish	_____	_____
Fax machine	_____	_____

10. How difficult is it for you to attend regular on-campus courses in your field?

___ impossible ___ difficult ___ inconvenient
___ no problem

11. How important is it to you to be able to fit a course around work and other responsibilities?

___ very important ___ important ___ not important

12. If you were to register for a distance learning course, who would pay for the course?

___ My employer ___ Voc Rehab ___ Myself

___ Other (please explain): _____

13. If you participated in distance learning courses, what would your goal be?

___ Prepare for evening 4 year BS degree
___ Complete AAS degree program
___ Complete BS program
___ Complete MS program
___ Complete Technical Certificate Program
___ Enrichment/self-improvement
___ Job advancement

COURSES CURRENTLY OFFERED BY RIT THROUGH DISTANCE LEARNING

Below is the list of courses and programs currently offered by the Distance Learning Office at RIT. Please check each as follows:

+ Definitely interested
? Possibly interested
o Not at all interested

PROGRAMS

___ M.S. in Telecommunications Software Technology

___ M.S. in Software Development and Management

___ B.S. in Applied Arts and Science (customizable degree)

___ Certificate in Applied Computing and Communications

___ Certificate in Data Communications

___ Certificate in Voice Communications

___ Certificate in Health Systems Administration

___ Certificate in Emergency Management

TYPES OF UNDERGRADUATE COURSES

___ Telecommunications

___ Information Technology

___ Electrical/Mechanical Technology

___ Business (Management, Marketing, TQM, Accounting)

___ Health Care Administration

___ Solid Waste Management

___ Emergency Management

___ Humanities (Philosophy, Politics, Literature, History)

___ Language Communications (Persuasion, Technical Writing, Human Communication)

___ Social Science (Psychology, Sociology, Economics)

___ Mathematics (College Algebra, Trigonometry, Calculus, Statistics)

___ Contemporary Science

We are considering captioning many of the above courses. What courses/programs/workshops would you recommend that NTID/RIT offer via distance learning in a captioned format? Circle those you would seriously consider taking. If you want to receive the complete list of courses and programs currently offered by NTID/RIT, please check the box below.

☐ **Yes, please send me the complete list of courses and programs.**

WHAT KIND OF LEARNER ARE YOU?

Please CIRCLE ALL statements that describe you:

I am curious and excited about new things	I sometimes need frequent feedback	I sometimes feel intimidated by computers
I use a computer at work	I accept my teacher's advice about a course	I sometimes am easily distracted
I am a good reader	I am willing to try new things	I am sometimes easily bored
I move from task to task easily	My physical dexterity is good	Most of the time I am prepared
I like to have the teacher's attention	I would describe myself as studious	I want to register for more courses
I often want to work slower/faster than others	I have a cooperative attitude	I find computer use interferes with social activities
I work carefully	I am sometimes critical	I prefer to work alone
I like to read a lot	I work with precision	I am motivated to learn
I want to control my own learning pace	I think I'm flexible	I communicate better in faceless situations
I sometimes need frequent reinforcement	I believe using a computer is fun	I think I'm adaptable
I prefer to watch a demonstration than to experiment on my own	I prefer to read a textbook than to listen to a teacher's lecture	I prefer to work in a group than to work alone
I am impatient	I feel confident	I sometime feel anxious

Please list other characteristics that you believe describe you as a learner:

_____ _____ _____

Would you like to learn more about the Distance Learning Courses offered by NTID and RIT? If yes, Please give us your name and address below, or call Gerry Buckley, Chair of the NTID Department of Educational Outreach, at 716/475-6800. You may also call the Office of Distance Learning at RIT - 1-800-CALL-RIT (TDD # 716-475-5712)

_____

_____

_____

Appendix D

Additional Information from Surveys not Summarized in Body of Report

Additional Distance learning Features Listed

Interested Institutions

Other features:
computers (2)
ETV
EdNet
fax
provides instructors with expertise
fiber optics
TDD in ASCII mode

Uninterested Institutions

Other features:

a combination of all the above
TDD/light signals
provides courses to small, rural schools

Type of distance learning course taken:

satellite TV (5)
telecourse (6)
sign language telecourse
correspondence course (3)

Interested Alumni

Prodigy
uses computer via modem
adaptive to individual schedules
uses fax, VCR
computer (3)
video

Uninterested Alumni

[none]

Alumni Job Titles

Interested Alumni

V.P. Treasurer
special police officer
designer (2)
programmer/system analyst (2)
data specialist
inpatient coder and abstractor
mechanical eng. tech.

Uninterested Alumni

senior tech. illustrator
vocational technician

Prior Experience with Distance Learning

Interested Alumni

in-house training (2)
correspondence course (2)
computer aided design

Uninterested Alumni

RIT course at RL Thomas High School

TABLE D-1

A Comparison of Alumni Who Do and Do Not Want To Receive a Complete List of NTID/RIT Distance Learning Courses and Programs

	Learning Styles and Characteristics			
	Percent Who Do Want List (n=54)	Percent Who Do Not Want List (n=20)	t	p
I am curious and excited about new things.	88.9	70.0	-1.66	.10
I use a computer at work.	40.7	40.0	-.06	.96
I am a good reader.	5.6	10.0	.59	.56
I move from task to task easily.	70.4	75.0	.39	.70
I like to have the teacher's attention.	40.7	40.0	-.06	.96
I often want to work slower/faster than others.	14.8	15.0	.02	.99
I work carefully.	61.1	55.0	-.46	.64
I like to read a lot.	94.4	75.0	-1.87	.08
I want to control my own learning pace.	20.4	15.0	-.54	.59
I sometimes need frequent reinforcement.	50.0	40.0	-.76	.45
I prefer to watch a demonstration than to experiment on my own.	38.9	25.0	-1.16	.25
I am impatient.	44.4	45.0	.04	.97
I sometimes need frequent feedback.	11.1	15.0	.42	.68
I accept my teacher's advice about a course.	24.1	30.0	.49	.62
I am willing to try new things.	42.6	25.0	-1.46	.15
My physical dexterity is good.	33.3	35.0	.13	.90
I would describe myself as studious.	72.2	70.0	-.18	.86
I have a cooperative attitude.	5.6	5.0	-.09	.92
I am sometimes critical.	66.7	60.0	-.51	.61
I work with precision.	22.2	25.0	.24	.81
I think I'm flexible.	22.2	50.0	2.17	.03*
I believe using a computer is fun.	44.4	60.0	1.18	.24
I prefer to read a textbook than to listen to a teacher's lecture.	27.8	35.0	.58	.57
I feel confident.	79.6	85.0	.54	.59
I sometimes feel intimidated by computers.	68.5	70.0	.12	.90
I sometimes am easily distracted.	70.4	65.0	-.43	.67

	Learning Styles and Characteristics			
	Percent Who Do Want List (n=54)	Percent Who Do Not Want List (n=20)	t	p
I am sometimes easily bored.	7.4	15.0	.85	.40
Most of the time I am prepared.	24.1	30.0	.49	.62
I want to register for more courses.	72.2	50.0	-1.71	.10
I find computer use interferes with social activities.	40.7	40.0	-.06	.96
I prefer to work alone.	37.0	20.0	-1.50	.14
I am motivated to learn.	20.4	20.0	-.03	.97
I communicate better in faceless situations.	27.8	25.0	-.24	.81
I think I'm adaptable.	7.4	15.0	.85	.40
I prefer to work in a group than to work alone	59.3	45.0	-1.08	.29
I sometimes feel anxious.	20.4	15.0	-.54	.59

Other Learning Characteristics Listed

Interested Alumni

quick learner (4)
well-organized (2)
hard worker (2)
like a challenge
disciplined
attend to details
creative
independent

Uninterested Alumni

well-organized
love to think
inventive

Additional, Miscellaneous Comments Offered by Alumni

Interested Alumni

Caption all offerings (2)

Uninterested Alumni

Quicktime by Apple Computer, email via the ISBN network, is an inexpensive multi-media resource

caption all offerings